

WILDLIFE MANAGEMENT UNIT - 5 - EAST CANYON

Boundary Description

Morgan, Summit, Salt Lake, and Davis counties - Boundary begins at the junction of I-80 and I-84 (Echo Junction); south and west on I-80 to Interstate 15; north on I-15 to I-84; east on I-84 to I-80.

Management Unit Description

The East Canyon deer herd unit is located mostly on the east side of the Wasatch Mountains. Topography varies across the unit from fairly deep canyons and steep slopes in the western portion to more gentle open slopes and fewer cliffs in the east. Most of the unit is drained by the Weber River. Several creeks along the north and east edges of the unit drain directly into the river. East Canyon Creek flows into the Weber River. A large impoundment on East Canyon Creek is located approximately in the center of the unit. The highest elevations are along the western boundary on peaks of the Wasatch Range which reach above 9,500 feet. The lowest point is 4,800 feet in the northwest corner where the Weber River flows out of the unit.

The upper limits of normal winter range are generally considered to be about 7,000 feet. Winter range is found in the major drainages and around East Canyon Reservoir. All of the valleys have been developed for agriculture and housing. The major canyons, Weber, East, and Main Canyons, contain housing developments and high-use roads. The northern, eastern, and southern boundaries are formed by Interstate 80. Other more narrow and higher elevation canyons have seasonal roads. The area is highly developed because a majority of the unit is private land. Eighty-three percent of the deer winter range and 76% of the summer range is under private ownership. Not only is the quantity of winter range limited, but the quality is compromised by development and roads. Many deer that summer on the unit migrate over to the Davis County portion of the unit on the Wasatch Face to winter. Winter migration onto the unit from other areas is minimal.

Most of the winter range is encompassed by sagebrush range types. In the original inventory in 1972, King and Olson described almost three-quarters of the winter range as a mixture of black sagebrush on the ridge tops and big sagebrush down the slopes on the deeper soils. This type has a good mix of browse species and can provide substantial forage for wintering deer. The browse type, 20% of the range, is composed mainly of big sagebrush and Gambel oak. Other range types include agricultural lands and burns.

Recently, increased numbers of people and deer have lead to conflicts and degradation of the winter range. Heavy deer and livestock use has resulted in apparent downward trends on much of the range. Soil erosion, removal of perennial herbaceous cover, and heavy use of browse species are the major problems. Highway mortality occurs, but is not as high here as on surrounding units. Harvesting depredating deer is difficult because of access restrictions to private land. Reducing the deer herd to within the carrying capacity of the winter range must be done with the cooperation and support of local interest groups since a majority of the land is privately-owned.

Unit Management Objectives

The management objective is to maintain a target wintering deer herd of approximately 8,500 deer. The Davis and Salt Lake County portion of Unit 5 contains most of the public land in the unit. Winter ranges are adjacent to the heavily populated "Wasatch Front" and are becoming limited due to the impact of urban development. Therefore, the target winter deer herd population objective for this portion of Unit 5 is 3,000. The objective for the Morgan and Summit County portion is a winter population of 5,500 deer. The herd composition for the East Canyon management unit will be 15 bucks per 100 does. Of these bucks, 30% will be 3-point or better (1998 Utah Big Game Management Plan).

The management objective for elk is to maintain a winter herd size of 450. About 250 from the Davis and Salt Lake County portion of the unit with the other 200 from the Morgan & Summit County part. The objective for herb composition is to maintain ratio of 8 bulls per 100 cows. Fifty percent of the bulls will be 2.5 years of age or older (1998 Utah Big Game Management Plan).

The East Canyon deer herd unit, like the neighboring Lost Creek unit, has several management concerns related to the fact that a majority of the unit is under private ownership. The concerns listed in the 1984 trend study report (Giunta et al. 1986) remain today, especially relating to access, range management, and rehabilitation and development on the privately owned winter range. The DWR has purchased winter range in the Redrock Canyon area. The unit remains on the top priority list of units requiring winter habitat acquisition.

Trend Study Site Description

Ten trend studies were established in the East Canyon unit between 1983 and 1985. These 10 studies were reread in 1990. Eight of the ten studies were read again in 1996 and a new study was established in Red Rock Canyon. During the 2001 season, 7 of the eleven trend studies were reread. Individual study site descriptions, maps, and data tables are found below.

SUMMARY

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Seven trend studies were reread in the East Canyon unit in 2001. These trend studies were originally established in 1984 and 1985 and reread in 1990 and 1996. One site at Mountain Dell Reservoir was suspended and will be reevaluated in 2006. Two additional sites in Franklin Canyon were not read due to problems getting permission to access private land at the mouth of Franklin Canyon. Of the 7 sites read in 2001, all sample winter range. Soil trends for unit 5 are mostly stable, but 2 sites, Geary Hollow and Wanship, have down and slightly down trends respectively. All other sites have stable soil trends. The average soil trend for unit 5 is 2.6 or just below stable. Three would represent a stable value. Browse trends are stable for all sites with an average browse trend of 3.0 for the unit. Herbaceous trends are generally improving. Only one site, Davis County Rifle Range, had a declining herbaceous trend. The average herbaceous trend for the unit is 4.0, or slightly up. The main reason for the improvement in the herbaceous trends is a general decline in annual grasses which dominate many of the herbaceous understories. Perennial grasses have correspondingly increased on many sites.

All seven sites read in 2001 have significant amounts (>20% of the grass cover) of annual grasses in their understories. The average cover of annual grasses was 25% in 1996, which accounted for, on average, 69% of the grass cover. Due to aspect, slope, and rock on the surface and in the profile, many of these sites have high average soil temperatures. Soil temperature averages 68° F at an average depth of over 13 inches. This condition causes the soil profile to dry out early in the summer and it gives winter annuals like cheatgrass a competitive advantage over most of the perennial grasses. However, due to the dry and spring conditions, annuals have declined. In 2001, average cover of annual grasses dropped nearly threefold to 9%. Annual grasses now account for an average of 33% of the grass cover. Three sites, East Canyon Reservoir, Davis County Rifle Range, and Red Rock Canyon, had a significant increase in the poor value perennial, bulbous bluegrass, which appears to have responded to the decline in annual grasses.

The primary cause of the decline in annual grasses on unit 5 is the dry conditions during the and spring of 2000 and 2001. Precipitation data from Farmington, which would represent conditions along the Wasatch front portion of unit 5, indicate a generally wet period from 1980 through 1986. A 4 year drought period followed from 1987 through 1990. Between 1991 and 1998, wet years alternated with dry years. Above normal annual precipitation was received in 1995 and 1996. Annual precipitation was near normal in 2000, however all months were normal or below except for February and August which were 174% and 363% of normal respectively. The spring months of 2000 (April-June) were extremely dry averaging only 47% of normal. April precipitation was only 25% of normal and May 36% of normal. Spring precipitation was also below normal in 2001, averaging 63% of normal between April and June. April of 2001 was slightly above normal but May was extremely dry averaging only 9% of normal (Utah climate summaries 2001).

Precipitation at Echo Dam and Wanship, representative of the east side of unit 5, indicate a wet period which extended from 1980 to 1986. An extended drought followed with dry conditions prevailing from 1987 to 1990. Wet and dry years alternated from 1991 to 1995, followed by 4 wet years from 1995 to 1998. Precipitation was below normal in both 1999 and 2000 at Wanship, but below normal in only 1999 at Echo Dam. The general trend of dry spring conditions was encountered at both sites with April to June precipitation being, on average, 77% of normal in 2000 and 73% of normal in 2001. Precipitation was well below normal in April and June of 2000 at Echo Dam. April precipitation was only 52% of normal and June, 12%. In 2001, May and June were extremely dry. At Echo Dam, May precipitation was only 16% of normal. No precipitation was received at Wanship in May. June precipitation was 59% of normal at Echo Dam and 35% of normal at Wanship. Dry conditions during the spring have apparently caused a general decline in the nested frequencies and cover of annual grasses with a corresponding significant increase in the nested frequency and cover of perennial species. A summary of individual site trends follows.

TREND SUMMARY

Location	Category	1984	1990	1996	2001
5-1 Geary Hollow	soil	est	3	3	1
	browse	est	3	3	3
	herbaceous understory	est	3	4	4
5-2 Tucson Hollow	soil			est	3
	browse			est	3
	herbaceous understory			est	5
5-3 East Canyon Reservoir	soil	est	3	4	3
	browse	est	3	4	3
	herbaceous understory	est	3	3	3
5-4 Wanship	soil	est	3	4	2
	browse	est	1	5	3
	herbaceous understory	est	3	4	5
5-5 Upper Franklin Canyon	soil	est	1	3	NR
	browse	est	2	5	NR
	herbaceous understory	est	3	3	NR
5-6 Franklin Canyon	soil	est	3	3	NR
	browse	est	1	2	NR
	herbaceous understory	est	4	3	NR
Location	Category	1985	1990	1996	2001
5-8 Barnard Creek	soil	est	3	4	3
	browse	est	3	3	3
	herbaceous understory	est	2	3	4
5-9 Davis County Rifle Range	soil	est	3	NR	3
	browse	est	2	NR	3
	herbaceous understory	est	3	NR	2
Location	Category	1983	1990	1996	2001
5-11 Mountain Dell Reservoir	soil	est	3	3	susp
	browse	est	4	4	susp
	herbaceous understory	est	3	3	susp

1 = down, 2 = slightly down, 3 = stable, 4 = slightly up, 5 = up, est = established, susp = suspended

Location	Category	1996	2001
5-15 Red Rock Canyon	soil	est	3
	browse	est	3
	herbaceous understory	est	5

1 = down, 2 = slightly down, 3 = stable, 4 = slightly up, 5 = up, est = established,
susp = suspended